

**Mercy Hospital
Cumberland County
Portland, Maine
A-201-71-E-N**

**Departmental
Findings of Fact and Order
Air Emission License
After-the-Fact**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Mercy Hospital of Portland, Maine has applied for an after the fact renewal of their Air Emission License permitting the operation of emission sources associated with their healthcare facility.

B. Emission Equipment

Mercy Hospital is licensed to operate the following equipment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Stack #</u>
Boiler #1	6.0	42.9	Nat. Gas / #2 oil, 0.35%	1
Boiler #2	7.0	50.0	Nat. Gas / #2 oil, 0.35%	1
Boiler #3	10.0	71.4	Nat. Gas / #2 oil, 0.35%	1

Electrical Generation Equipment

<u>Equipment</u>	<u>Power Output (kW)</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Fuel Type, % sulfur</u>
Generator A	250	2.4	#2 fuel oil, 0.35%
Generator B	275	2.7	#2 fuel oil, 0.35%

C. Process Equipment

Mercy Hospital operates a spray booth for spraying paint and lacquer on small items. The spray booth is equipped with an exhaust fan vented directly outside with a two inch thick pleated media filter to capture particulate matter.

D. Application Classification

The previous air emission license for Mercy Hospital expired on February 17, 2000. A complete application was not submitted on time, therefore Mercy Hospital is considered to be an existing source applying for an after-the-fact renewal. The facility is determined to be a minor source and the application has been processed through Chapter 115 of the Department's regulations.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers

Boilers #1, #2, and #3 are both licensed to fire natural gas and #2 fuel oil with a sulfur content not to exceed 0.35% by weight.

Boilers #1 and #2 have heat inputs of 6.0 MMBtu/hr and 7.0 MMBtu/hr respectively and are therefore not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989. Boiler #3 was installed in 1984 and is therefore also not subject to NSPS Subpart Dc.

A summary of the BPT analysis for Boiler #1 (6.0 MMBtu/hr), Boiler #2 (7.0 MMBtu/hr), and Boiler #3 (10.0 MMBtu/hr) is the following:

1. The total fuel use for the Boilers shall not exceed 60 MMscf/year of natural gas plus 400,000 gal/year of #2 fuel oil, based on a 12 month rolling total. The maximum sulfur content of the #2 fuel oil shall not exceed 0.35% by weight.

2. Chapter 106 regulates fuel sulfur content, however in this case BPT for SO₂ was determined to be a more stringent limit of 0.35% and shall be used.
3. Chapter 103 regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
4. NO_x emission limits are based on data from similar boilers of this size and age.
5. CO and VOC emission limits are based upon AP-42 data.
6. Visible emissions from the boilers shall not exceed 20% opacity on a 6 minute block average, except for no more than 2 six minute block averages in a continuous 3 hour period.

C. Generators

Mercy Hospital operates two back up emergency diesel generators. A summary of the BPT analysis for Generator A (250 kW) and Generator B (275 kW) is the following:

1. The emergency generators shall fire only #2 fuel oil or diesel fuel with a maximum sulfur content not to exceed 0.35% by weight.
2. The emergency generators shall each be limited to 100 hr/yr of operation based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
3. Chapter 106 regulates fuel sulfur content, however in this case BPT for SO₂ was determined to be a more stringent limit of 0.35% and shall be used.
4. The PM and PM₁₀ limits are derived from Chapter 103.
5. NO_x, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
6. Visible emissions from the generators shall not exceed 20% opacity on a 6 minute block average, except for no more than 2 six minute block averages in a continuous 3 hour period.

D. Annual Emission Restrictions

Mercy Hospital shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	7.1
PM ₁₀	7.1
SO ₂	9.9
NO _x	12.5
CO	3.8
VOC	0.33

The emission restrictions listed above were based on the following:

- firing 400,000 gal/year of #2 fuel oil with a sulfur limit of 0.35%
- firing 60 MMscf of natural gas
- operating each generator for 100 hrs/year

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

<u>Pollutant</u>	<u>Tons/Year</u>
PM	50
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on the above total facility emissions, Mercy Hospital is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-201-71-E-N subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. 353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.

- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
 - (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances

- representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
- (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.
- (16) Boilers
- A. Fuel oil use shall not exceed 400,000 gal/yr of #2 fuel oil (12 month rolling total) with a maximum sulfur content not to exceed 0.35% by weight. Fuel records, including gallons used and percent sulfur, shall be maintained on a monthly basis in addition to the 12 month rolling total

- B. Natural gas use shall not exceed 60 MMscf/year (12 month rolling total). Fuel records, including scf used, shall be maintained on a monthly basis in addition to the 12 month rolling total.
- C. Emissions shall not exceed the following firing oil:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #1	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.72	0.72	2.10	1.80	0.21	0.01
Boiler #2	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.84	0.84	2.45	2.10	0.25	0.02
Boiler #3	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	1.20	1.20	3.50	3.00	0.36	0.02

- D. Emissions shall not exceed the following when firing natural gas:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #1	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.72	0.72	0.01	0.58	0.49	0.03
Boiler #2	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.84	0.84	0.01	0.68	0.57	0.04
Boiler #3	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	1.20	1.20	0.01	0.97	0.82	0.05

- E. Visible emissions from Boilers #1, #2, and #3 shall not exceed 20% opacity on a 6 minute block average, except for no more than 2 six minute block averages in a continuous 3 hour period.

(17) Emergency Generators

- A. Mercy Hospital shall limit each emergency generator to 100 hr/yr of operation (based on a 12 month rolling total). Hour meters shall be installed and operated on the generators.
- B. A log documenting the dates, times, and reason of operation for the generators shall be kept.
- C. The generators shall fire #2 fuel oil or diesel with a sulfur limit not to exceed 0.35% by weight. Fuel records, including percent sulfur, shall be maintained.

D. Emissions shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Generator A	lb/hr	0.29	0.29	0.84	10.58	2.28	0.84
Generator B	lb/hr	0.32	0.32	0.95	11.91	2.57	0.95

E. Visible emissions from Generators A and B shall each not exceed 20% opacity on a 6 minute block average, except for no more than 2 six minute block averages in a continuous 3 hour period.

- (18) Mercy Hospital shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).
- (19) The term of this Order shall be for five (5) years from the signature below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2001.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 8/21/01

Date of application acceptance: 8/29/01

Date filed with the Board of Environmental Protection: _____

This Order prepared by Lynn Ross, Bureau of Air Quality.